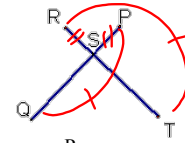


2-7 Proving Segment Relationships
2-8 Proving Angle Relationships

Continued

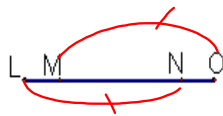
Example 1

Given: $RT = PQ$; $RS = PS$ Prove: $ST = SQ$ 

Statements	Reasons
① $RT = PQ$ $RS = PS$	① Given
② $RT = RS + ST$ $PQ = PS + SQ$	② S.A.P.
③ $RS + ST = PS + SQ$	③ Subst.
④ $ST = SQ$	④ Subtr.

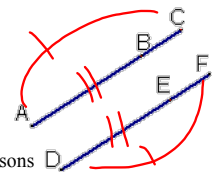
* w/ a subtraction step ② will S.A.P.

Example 2

Given: $LN = MO$ Prove: $LM = NO$ 

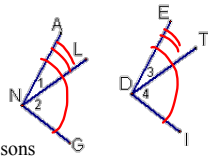
Statements	Reasons
① $LN = MO$	① Given
② $LN = LM + MN$ $MO = MN + NO$	② S.A.P.
③ $LM + MN = MN + NO$	③ Subst.
④ $MN = MN$	④ Reflexive
⑤ $LM = NO$	⑤ Subtr.

DO:

Given: $AC = DF$; $AB = DE$ Prove: $BC = EF$ 

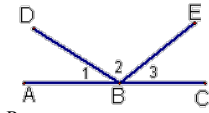
Statements	Reasons
① $AC = DF$ $AB = DE$	① Given
② $AC = AB + BC$ $DF = DE + EF$	② S.A.P.
③ $AB + BC = DE + EF$	③ Subst.
④ $BC = EF$	④ Subtr.

EXAMPLE 4:

Given: $m\angle ANG = m\angle EDI$, $m\angle 1 = m\angle 3$ Prove: $m\angle 2 = m\angle 4$ 

Statements	Reasons
① $m\angle ANG = m\angle 1 + m\angle 2$	① Given
② $m\angle EDI = m\angle 3 + m\angle 4$	② AAP
③ $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4$	③ Subst
④ $m\angle 2 = m\angle 4$	④ Subtr.

DO:

Given: $m\angle ABE = m\angle DBC$ Prove: $m\angle 1 = m\angle 3$ 

Statements	Reasons

HW

p104-105 20, 22

p120 54